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09/816,705	03/23/2001	Kazuhiko Sugiyama	0050-0128	5930

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/816,705

Applicant(s)

SUGIYAMA ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 26 February 2007 have been fully considered but they are not persuasive. On page 9 of the Response, Applicant asserts that Doshi "does not disclose that virtual provisioning server 230 stores information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, where the information includes telephone numbers of telephones in the first and second voice networks." Examiner agrees that Doshi does not expressly disclose this limitation. However, as outlined below, Examiner submits that Doshi suggests such a limitation since Doshi suggests combining the Virtual Provisioning Server and the Signaling Gateway into a single unit, wherein this single unit, i.e. the claimed "path control unit," will store information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, where the information includes telephone numbers of telephones in the first and second voice networks.
2. On page 10 of the Response, Applicant asserts that Doshi "does not disclose that virtual provisioning server 230 of Doshi stores connection relationships between packet circuit gateways (PCGs) 215 and routers 220." Examiner, respectfully, disagrees. Doshi discloses that "the Virtual Provisioning Server 230 determines the maximum number of voice calls that can be supported simultaneously between any pair of Packet Circuit Gateways 215" (col. 5, lines 3-6). Doshi further discloses that "it is important to provide messaging from the Virtual Provisioning Server 230 to the Signaling Gateway 250, thus informing the Signaling Gateway about the call capacities for PCG-to-PCG paths for a minimum of telephony traffic originating from PSTN and

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PCs” (col. 5, lines 54-60). Since the Virtual Provisioning Server provides information about paths between Packet Circuit Gateways, and since the connection between the Packet Circuit Gateways and the routers constitute part of the path between Packet Circuit Gateways, Examiner maintains that the Virtual Provisioning Server stores connection relationships between Packet Circuit Gateways.

3. Applicant additionally asserts, on page 10 of the Response, that Doshi fails to disclose “setting a new path” since Doshi simply “has prestored information regarding various paths and checks for alternative paths when a voice call request is received.” Examiner, respectfully, submits that the claim does not recite, “set a new path that did not previously exist” as Applicant asserts. Rather, the claims merely recite: “setting a new path.” Here, Doshi discloses that when packets are sent along a first path and that first path fails, then subsequent packets will be sent along a pre-set alternative path (col. 9, lines 54-64, see also col. 3, lines 55-61). The pre-set alternative path is a “new path” since the connection was not previously sent along this path. Thus, Examiner maintains that the cited prior art discloses “setting a new path.”

4. In view of the foregoing, Examiner maintains that the claims are obvious in view of the cited prior art.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (USPN 6,529,499), of record.

7. Regarding claims 1, 8, and 15, Doshi discloses an Internet telephone system for voice communication between a telephone subscribing to a first voice network and a telephone subscribing to a second voice network via a network using an Internet protocol (Fig. 1 and col. 3, lines 5-24), comprising: a plurality of routers (ref. 220) configured to use a switching technique (col. 4, lines 1-19); a first media gateway (ref. 215: packet circuit gateway, PCG) coupled to a first one of the plurality of routers and a first signaling transfer point (ref. 250: signaling gateway) connected to said first voice network (col. 2, line 46-col. 3, line 42); a second media gateway (ref. 215: packet circuit gateway, PCG) coupled to a second one of the plurality of routers and a second signaling transfer point (ref. 250: signaling gateway) connected to said second voice network (col. 2, line 46-col. 3, line 42); a path control unit (ref. 230: virtual provisioning server) configured to: store information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways (col. 5, lines 3-6, where the virtual provisioning server determines the maximum number of voice calls that can be simultaneously supported between two gateways such that the virtual provisioning server must know the number of calls, i.e. a connections relationship between telephones in the voice network and the gateways, in existence at any given time); store connection relationships between the first and second media gateways and the plurality of routers (col. 5, lines 30-48, where the virtual provisioning server knows of the connection relationships between the gateways and the routers since it properly allocates routing weights to the system); store a maximum band settable between adjacent ones of the plurality of routers (col. 4, lines 58-

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67, where the virtual provisioning server determines when a path does not “have the necessary bandwidth capacity to meet determined capacity requirements,” i.e. when the path has reached the maximum band settable between adjacent routers, see also col. 4, lines 28-40); and determine whether a first path having a first band larger than a band necessary for transferring said VoIP packet between said first router and said second router exists (col. 3, lines 43-67, where the virtual provisioning server determines if a path between the first and second router exists, and where any path will have a band larger than a bank necessary for transferring a VoIP packet since a path comprises physical links which are capable of carrying multiple packets at any given time, see also col. 4, lines 28-44); and a packet control unit (ref. 250: signaling gateway) coupled to said path control unit (ref. 230: virtual provisioning server), configured to: instruct said first media gateway (ref. 215: packet circuit gateway, PCG) and said second media gateway (ref. 215: packet circuit gateway, PCG) to transfer VoIP packets via a path (Fig. 1 and col. 3, lines 43-61).

Doshi does not expressly disclose in the main embodiment that the routers are label switch routers; however, Doshi does disclose in another embodiment that the routers can be label switch routers since label switch routers are well known (col. 9, lines 54-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the routers be label switch routers since label switch routers are well known.

Doshi does not expressly disclose in the main embodiment, when it is determined that the first path having the first band does not exist, setting a new path having a band that is equal to or more than double the band necessary for transferring the VoIP packet; or that the path set by said path control unit is used when another path cannot be found; however, Doshi discloses that, when label switch routers are used, the path control unit (ref. 230: virtual provisioning server)

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“maintains a knowledge base of possible multiple paths between pairs of” media gateways (ref. 215: packet circuit gateway, PCG) such that the packet control unit (ref. 250: signaling gateway) is instructed to admit a new call when there is capacity over any of the possible paths (col. 9, lines 54-56) where each path has a band that is sufficient to support multiple connections (col. 4, line 65-col. 5, line 6) such that each path would have a band equal to or more than a double band of said necessary band. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to set, when it is determined that there is not said path, by the path control unit, a new path having a band that is equal to or more than a double band of said necessary band and to use this path for the new connection since these steps are implemented when label switch routers are used.

Doshi does not expressly disclose that the information stored in the path control unit includes telephone numbers of telephones in the first and second networks. However, Doshi does disclose that the Signaling Gateways identify new call connection requests by phone numbers (col. 3, lines 12-24, where SS7 signaling includes telephone numbers). Doshi also discloses that one Signaling Gateway is used to control multiple Packet Gateways (col. 5, lines 10-17). Since the Signaling Gateway and the Virtual Provisioning Server are closely related in that these two devices signal each other to perform call acceptance/rejection (col. 7, lines 25-32, see also col. 5, lines 54-60), it is implicit that co-locating Virtual Provisioning Server and the Virtual Provisioning Server provides bandwidth savings in the network since the communications between these two devices will not have to be transmitted across the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Signaling Gateway and the Virtual Provisioning Server in a single unit in order to

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provide bandwidth savings in the network. In such a system, the combined Signaling Gateway/Virtual Provisioning Server, i.e. the “path control unit,” will contain the telephone numbers of the telephones in the first and second networks.

8. Regarding claims 2 and 9, Doshi does not expressly disclose that the new path has a band that is equal to or more than a hundred times of the first band; however, Doshi does disclose that each path can support multiple connections (col. 4, line 65-col. 5, line 6). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Doshi discloses that the new path is equal to or more than a number of times of the first band, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the band of the new path be equal to or greater than any number of times the first band, including a hundred, absent a showing of criticality by Applicant.

9. Regarding claim 3, Doshi implicitly discloses a route control unit configured to control said plurality of label switch routers (col. 9, lines 54-64) since Doshi discloses that the router is a label switch router (col. 9, lines 54-64) and Doshi discloses that the Signaling Gateways are capable of dictating which path out of a plurality of alternative paths a packet should traverse between the label switch routers (col. 9, lines 54-64). Thus, Doshi implicitly discloses a route

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control unit configured to control said plurality of label switch routers since a route control unit is necessary for a unit to designate a particular path through a network of label switch routers for a packet to traverse.

10. Regarding claim 4, Doshi discloses that the route control unit is provided to each label switch router since each router is capable of routing a packet among a variety of paths (col. 9, lines 54-64, where "provided to" is a broad phrase which only requires that each label switch router is connected to a route control unit).

11. Regarding claim 5, Doshi discloses that the route control unit is connected to all label switch routers (col. 9, lines 54-64, where each label switch router would need to have access to the route control unit in order for the router control unit to specify a particular path through the network of label switch routers).

12. Regarding claim 6, Doshi discloses a path setting method of setting a path to which a band is ensured on a network using an Internet protocol connected between a first voice network and a second voice network to execute voice communication between a telephone associated with said first voice network and a telephone associated with said second voice network (Fig. 1 and col. 2, line 46-col. 4, line 19), comprising: storing information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways (col. 5, lines 3-6, where the virtual provisioning server determines the maximum number of voice calls that can be simultaneously supported between two gateways such that the virtual provisioning server must know the number of calls, i.e. a connections relationship between telephones in the voice network and the gateways, in existence at any given time); storing connection relationships between the first and second media gateways and the plurality of

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routers, the plurality of routers including edge routers (col. 5, lines 30-48, where the virtual provisioning server knows of the connection relationships between the gateways and the routers since it properly allocates routing weights to the system, and Fig. 1, where the routers on the edge of the packet network are “edge routers”); determining whether a first path having a residual band larger than a first band necessary for transferring a VoIP packet between two edge routers (ref. 220) (col. 3, lines 43-67; col. 4, lines 28-44; and col. 4, line 58-48).

Doshi does not expressly disclose in the main embodiment that the routers are label switch routers; however, Doshi does disclose in another embodiment that the routers can be label switch routers since label switch routers are well known (col. 9, lines 54-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the routers be label switch routers since label switch routers are well known.

Doshi also does not expressly disclose in the main embodiment, when it is determined that the first path does not exist, setting a new path; however, Doshi further discloses that, when label switch routers are used, the path control unit (ref. 230: virtual provisioning server) “maintains a knowledge base of possible multiple paths between pairs of” media gateways (ref. 215: packet circuit gateway, PCG) such that the packet control unit (ref. 250: signaling gateway) is instructed to admit a new call when there is capacity over any of the possible paths (col. 9, lines 54-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to set, when it is determined that the first path does not exist, a new path since this step is implemented when label switch routers are used.

Doshi does not expressly disclose that the information stored in the path control unit includes telephone numbers of telephones in the first and second networks. However, Doshi does

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disclose that the Signaling Gateways identify new call connection requests by phone numbers (col. 3, lines 12-24, where SS7 signaling includes telephone numbers). Doshi also discloses that one Signaling Gateway is used to control multiple Packet Gateways (col. 5, lines 10-17). Since the Signaling Gateway and the Virtual Provisioning Server are closely related in that these two devices signal each other to perform call acceptance/rejection (col. 7, lines 25-32, see also col. 5, lines 54-60), it is implicit that co-locating Virtual Provisioning Server and the Virtual Provisioning Server provides bandwidth savings in the network since the communications between these two devices will not have to be transmitted across the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Signaling Gateway and the Virtual Provisioning Server in a single unit in order to provide bandwidth savings in the network. In such a system, the combined Signaling Gateway/Virtual Provisioning Server, i.e. the "path control unit," will contain the telephone numbers of the telephones in the first and second networks.

13. Regarding claim 7, Doshi does not expressly disclose that the new path has a band that is equal to or more than a hundred times of the first band; however, Doshi does disclose that each path can support multiple connections (col. 4, line 65-col. 5, line 6). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195

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USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Doshi discloses that the new path has a band that is equal to or more than a number of times of the first band, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the band of the new path be equal to or greater than any number of times the first band, including a hundred, absent a showing of criticality by Applicant.

14. Regarding claim 13, incorporating the rejection of claims 1, 6, and 8, Doshi discloses all of the limitation of claim 13, as outlined in the rejection of claims 1, 6, and 8, except that the method is implemented using a computer program product. Examiner takes official notice that it is well known to implement a method using software since software is flexible. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method using a computer program product since software is flexible.

15. Regarding claim 14, Doshi does not expressly disclose that the new path has a band of a hundred times of the first band; however, Doshi does disclose that each path can support multiple connections (col. 4, line 65-col. 5, line 6). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Doshi discloses that the new path has a band that is equal to or more than a number of times of the first band, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to have the band be equal to or greater than any number of times the first band, including a hundred, absent a showing of criticality by Applicant.

16. Regarding claim 16, Doshi does not expressly disclose that the controller is further configured to: manage the use of labels associated with the label switching network such that transfer of a VoIP packet from the first device to the second device through at least one other device uses a single label. However, Doshi does disclose the use of labels to communicate between a pair of devices. Examiner takes official notice that it is well known in MPLS to establish a path between two devices using a single label since this facilitates communication between the two devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to manage the use of labels associated with the label switching network such that transfer of a VoIP packet from the first device to the second device through at least one other device uses a single label in order to facilitate communication between the two devices

17. Regarding claim 17, Doshi discloses that each of the first and second devices comprises an edge router and the other device comprises a core router (col. 9, lines 54-65).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chiu et al. (USPN 6,973,033), see entire document, which pertains to setting paths for VoIP connections and setting new paths when an old path is unusable.

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19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

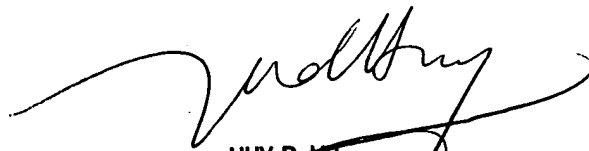
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman
Examiner
Art Unit 2616

DJR


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